

WHAT IS CLAIMED IS

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1. An image extraction method comprising:  
a first image pickup step to pick up an image  
of an object positioned in front of a background  
using wavelengths in a visible light region;  
10 a second image pickup step to pick up an image  
of the object positioned in front of the background  
using wavelengths in an infrared region; and  
an extracting step to extract only the object  
based on the images picked up by the first and  
15 second image pickup steps,  
wherein at least a surface of the background is  
formed by an organic dye.

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2. The image extraction method as claimed  
in claim 1, wherein said extracting step extracts  
the object from the image picked up by the first  
25 image pickup step depending on color, and extracts  
the object from the image picked up by the second  
image pickup step depending on luminance.

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3. The image extraction method as claimed  
in claim 1, wherein said organic dye has a color  
selected from a group consisting of blue-green color,  
35 gold color and silver color.

4. The image extraction method as claimed in claim 1, wherein said organic dye is selected from a group consisting of cyanine organic dyes, phthalocyanine organic dyes, and azo organic dyes.

5. An authentication apparatus

10 comprising:  
a first image pickup section to pick up an image of an object positioned in front of a background using wavelengths in a visible light region;

15 a second image pickup section to pick up an image of the object positioned in front of the background using wavelengths in an infrared region;

20 of the object based on the images picked up by the first and second image pickup sections to extract only an image extracted by the extracting section to compare the image object images, and to output a result of comparison

25 wherein at least a surface of the background is formed by an organic dye.

6. The authentication apparatus as claimed in claim 5, wherein said extracting section extracts the image of the object from the image picked up by the first image pickup section depending on color, and extracts the image of the object from the image picked up by the second image pickup section depending on luminance.

7. The authentication apparatus as  
claimed in claim 5, wherein said matching section  
outputs the comparison result by comparing an  
average of the image of the object extracted by the  
5 extracting section from the image picked up by the  
first image pickup section and the image of the  
object extracted by the extracting section from the  
image picked up by the second image pickup section,  
and the registered object images.

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8. The authentication apparatus as  
15 claimed in claim 5, wherein the organic dye has a  
color selected from a group consisting of blue-green  
color, gold color and silver color.

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9. The authentication apparatus as  
claimed in claim 5, wherein the organic dye is  
selected from a group consisting of cyanine organic  
25 dyes, phthalocyanine organic dyes, and azo organic  
dyes.

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